Reconfigured-Channel Monitoring and Assessment Program

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Channel reconfiguration to mitigate a variety of riverine conditions has become an important issue in the western United States. Reasons cited for channel reconfiguration include restoration to more natural or historical conditions, improved water conveyance in flood-prone areas, mitigation of unstable streambed and streambanks, more efficient sediment transport, and enhancement of fish and riparian habitat. Numerous projects have been undertaken to reconfigure stream and river channels. However, the effectiveness of these modifications over a period of time, in terms of channel changes and achievement of project objectives, has not been assessed in a consistent manner.

Channel-reconfiguration projects have been or are being undertaken for several river and stream reaches in Montana. In Colorado, the U.S. Geological Survey is engaged in the Reconfigured-Channel Monitoring and Assessment Program (RCMAP) to monitor and assess selected river reaches that have undergone reconfiguration. Long-term monitoring of physical changes and hydraulic performance of reconfigured channels can allow determination of why a particular reconfiguration design may have remained stable or failed. The RCMAP could be expanded to include reconfigured channels throughout the United States.